Orthosilicic acid—the form of silicon that is active in the body—is also called the “anti-weakness” nutrient. The reason is simple. Biologically active silicon is important for the strength and integrity of all the body’s support tissues.

Orthosilicic acid
- supports collagen production in the skin
- promotes keratin production in the hair and nails
- supplies an important element for joint and cartilage repair
- promotes the health and elasticity of the mucous membranes and arteries.

Recently it has been shown that orthosilicic acid’s benefits extend to the body’s ultimate structural components, the bones. In fact, individuals who take calcium almost certainly can improve their results by supplementing with biologically active silicon at the same time. Supplementation with orthosilicic acid increases the uptake of calcium from the diet. Moreover, the intake of silicon has been shown to be as important as any other nutrient, including calcium, in determining bone mineral density (BMD) in men and in women before menopause.

Stabilized concentrated orthosilicic acid is a patented product sold exclusively in the U.S. under the name BioSil™. Orthosilicic acid is biologically active silicon because it is the only form of silicon that is absorbed into the bloodstream and utilized by the tissues. All other sources of silicon must first be converted to orthosilicic acid before they can be metabolized. Only patented BioSil supplies stabilized orthosilicic acid. Human studies prove that silicon from BioSil is 250 percent more bioavailable than is silicon from horsetail herb or silica gels.

Silicon in its biologically active form provides so many benefits because it is intimately involved in the growth and repair of all of the structural tissues found in the body. In part this is through its role in the biosynthesis of collagen. Collagen is the most abundant protein found in the body and underlies the health of tissues ranging from the skin to the bones. The formation of collagen into support structures requires cross-linking through the activity of enzymes known as metallo-enzymes because they are activated by metals. From detailed biochemical analysis it has been shown that silicon is present in collagen-based networks as silanolate. Silanolate is a derivative of silicic acid. Supplementing with orthosilicic acid stimulates the synthesis of collagen and leads to an enhancement of the repair of all tissues based upon this structural protein.

Although most people are unaware of it, enhanced collagen synthesis plays a significant role in bone mineral density and bone quality. Approximately 28 percent of bone consists of collagen, which is found mostly in the matrix. New studies report that silicon is as important as calcium and other nutrients in aiding new bone growth. Silicon promotes bone formation, whereas most bone health products focus on preventing bone resorption rather than promoting bone renewal. Also of great interest is the fact that BioSil increases serum calcium levels independent of increased calcium intake.

BioSil orthosilicic acid is highly concentrated. One bottle of BioSil contains the amount of silicon found in 600 bottles of mineral water. BioSil can be absorbed directly through the stomach wall and from the gastrointestinal tract into the bloodstream for maximum bioavailability. Now BioSil also is available in Vegi-Cap dry capsule form. Each capsule provides 5 mg silicon as orthosilicic acid.
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